Manitoba
Energy and Mines
Petroleum

Manitoba Petroleum Royalty and Tax Information

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Table of Contents

		Page
	Introduction	1
I.	Manitoba Drilling Incentive Program	2
II.	Enhanced Oil Recovery Incentive Program	7
III.	Provincial Crown Oil Royalties	13
IV.	Provincial Freehold Oil Tax	16
V.	Provincial Gas Royalties and Taxes	20

List of Figures and Attachments

	Page
Holiday Oil Volume Factors	4
Enhanced Oil Recovery Incentive Program	9
Example EOR Incentive Calculation	10
Enhanced Oil Recovery Incentive Program – Example	11
Manitoba Crown Oil Royalty Rates	18
Manitoba Freehold Oil Tax Rates	19
Oil Fields in Manitoba	21

List of Tables

	Page
Holiday Volumes for Example Wells	5
Crown Oil Royalties	15
Freehold Oil Taxes	17

Introduction

This booklet has been assembled to provide the reader with a general overview of the petroleum royalty/tax structure and incentive programs currently operating in Manitoba. As always, the reader should consult the appropriate Acts or Regulations for final authority.

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I. Manitoba Drilling Incentive Program

With the expiry of the previous drilling incentive program on December 31, 1986, a new Manitoba Drilling Incentive Program has been developed to encourage operators to drill for oil in Manitoba.

The new program provides operators of new wells drilled after January 1, 1987 and prior to January 1, 1992 with a royalty/tax free "holiday volume" of oil. This "holiday volume" is sensitive to oil price and dependent on the well's location, depth, producing formation and qualifying credits from previous dry holes.

Each new oil well drilled in Manitoba during the program qualifies for a "holiday volume" of oil to a maximum of 10 000 m^3 or 5 years of production, whichever occurs first.

The program applies to wells drilled on either Crown or freehold owned mineral rights.

The holiday oil volume is calculated in accordance with the following equation (Schedule C of Petroleum Crown Royalty and Incentives Regulation):

HOLIDAY OIL VOLUME

$$VT = Vk + Vd + Vf + VTi(ti)$$

where:

VT = TOTAL ROYALTY HOLIDAY VOLUME (cu.m.)
Vk = DISTANCE FACTOR VOLUME (cu.m.)
Vd = DEPTH FACTOR VOLUME (cu.m.)
Vf = FORMATION FACTOR VOLUME (cu.m.)
VTi(ti) = QUALIFYING DRY HOLE VOLUME (cu.m.)

Figure 1 graphically illustrates three of the four factors that determine "holiday volume" under the new drilling incentive program while the fourth factor in the equation (Qualifying Dry Hole Volume) is determined by the following equation:

QUALIFYING DRY HOLE VOLUME VTi(ti)

VTi(ti) = sum of qualifying dry hole volumes VTi(ti) for each unallocated qualifying dry hole

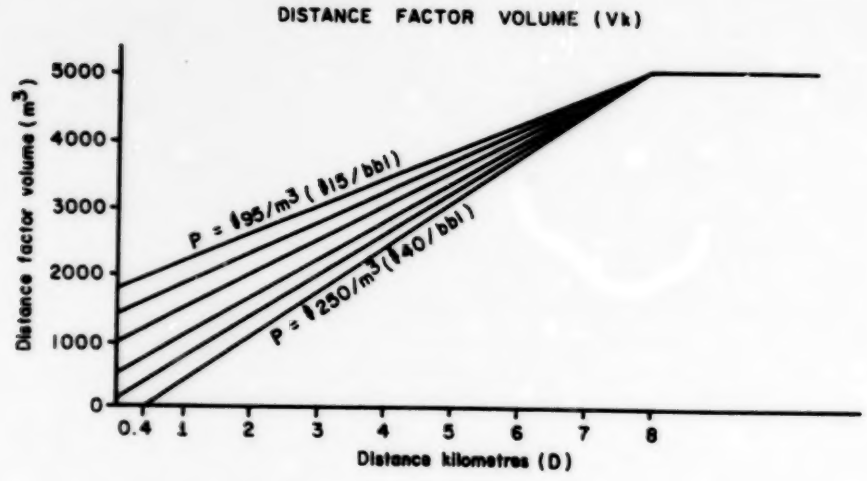
where:

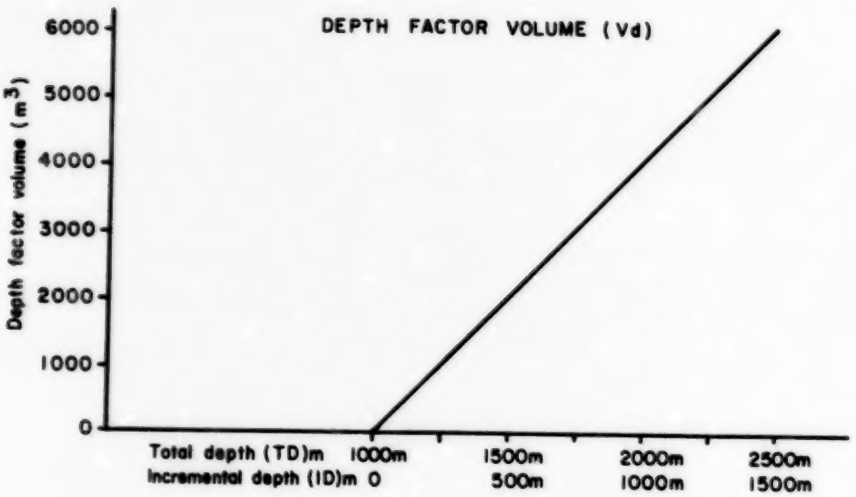
VTi = the Total Holiday Oil Volume (VT) for each previously unallocated qualifying dry hole

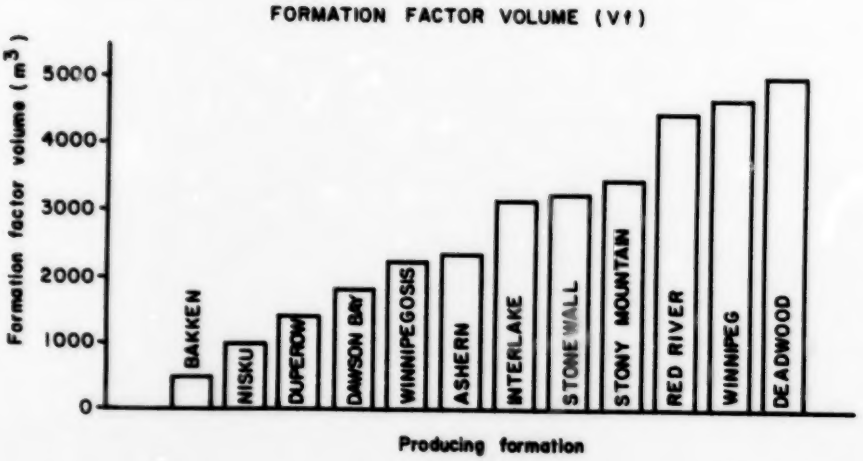
ti = the "Time Reduction Factor" for each dry hole
= 0.5, when dry hole drilled within previous year
= 0.2, when dry hole drilled more than 1 year but less than 2 years previous
= 0.0, when dry hole drilled more than 2 years previous or prior to January 1, 1987

Table 1 provides examples of "holiday volumes" for several different types of wells.

HOLIDAY OIL VOLUME FACTORS







Note: Not for calculation purposes.

TABLE 1

HOLIDAY VOLUMES FOR EXAMPLE WELLS

Example	I	II	III	IV	V	VI	VII
CLASSIFICATION	Development	Exploratory (NFW)	Development	Exploratory (NFW)	Exploratory (NFW)	Exploratory (DFW)	Development
Depth (m)	850	1 000	900	1 300	2 000	2 000	850
Formation (prod.)	Lodgepole (Miss.)	Lodgepole (Miss)	Bakken (Miss.)	Lodgepole (Miss.)	Red River (Ord.)	Upgosis(Dev.)	Lodgepole (Miss.)
Distance D (km)	0.4	8.0	0.4	4.0	8.0	0.4	0.4
Oil Price P ($/m^3)	125.00	125.00	125.00	125.00	125.00	125.00	125.00
HOLIDAY VOLUME CALCULATION:							
Distance Factor Volume V_k(m^3)	1 607.0	4 970.0	1 607.0	3 200.0	4 970.0	1 607.0	1 607.0
Depth Factor Volume V_d(m^3)	N/A	NIL	N/A	1 200.0	4 000.0	4 000.0*	N/A
Formation Factor Volume V_f(m^3)	N/A	N/A	500.0	N/A	4 400.0	2 200.0	N/A
Qualifying Dry Hole Volume $VT_i t_i$(m^3)	NIL	NIL	NIL	NIL	NIL	NIL	5 003.5**
TOTAL HOLIDAY Volume VT(m^3)	1 607.0	4 970.0	2 107.0	4 400.0	10 000.0 (max.)	7 807.0	6 610.5

* Assumes deepest well within 1.6 km was not greater than 1 000 m.

** Assumes wells in Examples II, IV and VI were dry holes drilled by operator within previous one year period.
= 0.5(4 400.0 + 5 607.0) = 5 003.5

NOTE: Formation Factor Volumes are <u>not</u> included in Qualifying Dry Hole Volume Credits.

The following two examples show the value of the Manitoba Drilling Incentive Program for a typical development well and deep exploratory well drilled on Crown owned oil and gas rights.

Assuming that the development well was .4 km from the nearest well cased for production, drilled to a depth of 850 metres when the oil price was $\$125/m^3$ ($19.86/bbl), and producing oil from the Mississippian Lodgepole Formation at a rate of 75 m^3/month (15 BOPD), the total calculated holiday volume would be 1 607 m^3. This equates to a holiday production period of 21.4 months and results in a Crown royalty saving to the operator of approximately $30,000.

Assuming that the exploratory well was 8 km from the nearest well cased for production, drilled to a depth of 2 000 metres when the oil price was $\$125/m^3$ ($19.86/bbl) and producing oil from the Winnipegosis Formation at a rate of 250 m^3/month (50 BOPD), the total calculated holiday volume would be limited to the maximum volume of 10 000 m^3. This would equate to a holiday production period of 40 months and would result in a Crown royalty saving to the operator of approximately $274,000.

It should be noted that the above examples do not include any qualifying dry hole credits from previous unsuccessful wells.

II. Enhanced Oil Recovery Incentive Program

For the first time in Manitoba, an incentive program has been designed to encourage maximization of oil reserves through enhanced oil recovery projects.

Wells in qualifying new or enlarged enhanced oil recovery projects approved under The Mines Act, after January 1, 1987, and fully implemented prior to January 1, 1992, will be eligible for an EOR incentive period (maximum of 60 months) based on the initial oil production rate and the average initial water cut for wells in the project.

Eligible projects will be granted reduced royalty and tax rates equivalent to 35% of the base Crown oil royalty rate charged on "old oil" in the case of Crown wells and the corresponding freehold oil tax "incentive rate" (Schedule A, Section 3 - Oil and Gas Production Tax Regulation).

The length of the incentive period offered through the Enhanced Oil Recovery Program is calculated by the following formula:

ENHANCED OIL RECOVERY PROGRAM

$$EORIP = Io + Iwc$$

where: EORIP = Total incentive period in producing months(maximum of 60)

$Io = 72 - 9q$

Io = qualifying EOR Incentive Period based on average Initial Oil Production Rate.

q = Average Daily Oil Production Rate during first four (4) producing months.

$Iwc = wc / 2.5$ (maximum 24 months)

Iwc = qualifying EOR Incentive Period based on the average Initial Water Cut.

wc = Average Water Cut during first four (4) producing months.

Figure 2 graphically illustrates the allowable incentive period eligibility based on initial oil production and water cut.

Figures 3 & 4 provide an example of the incentive period calculation for a four (4) well project.

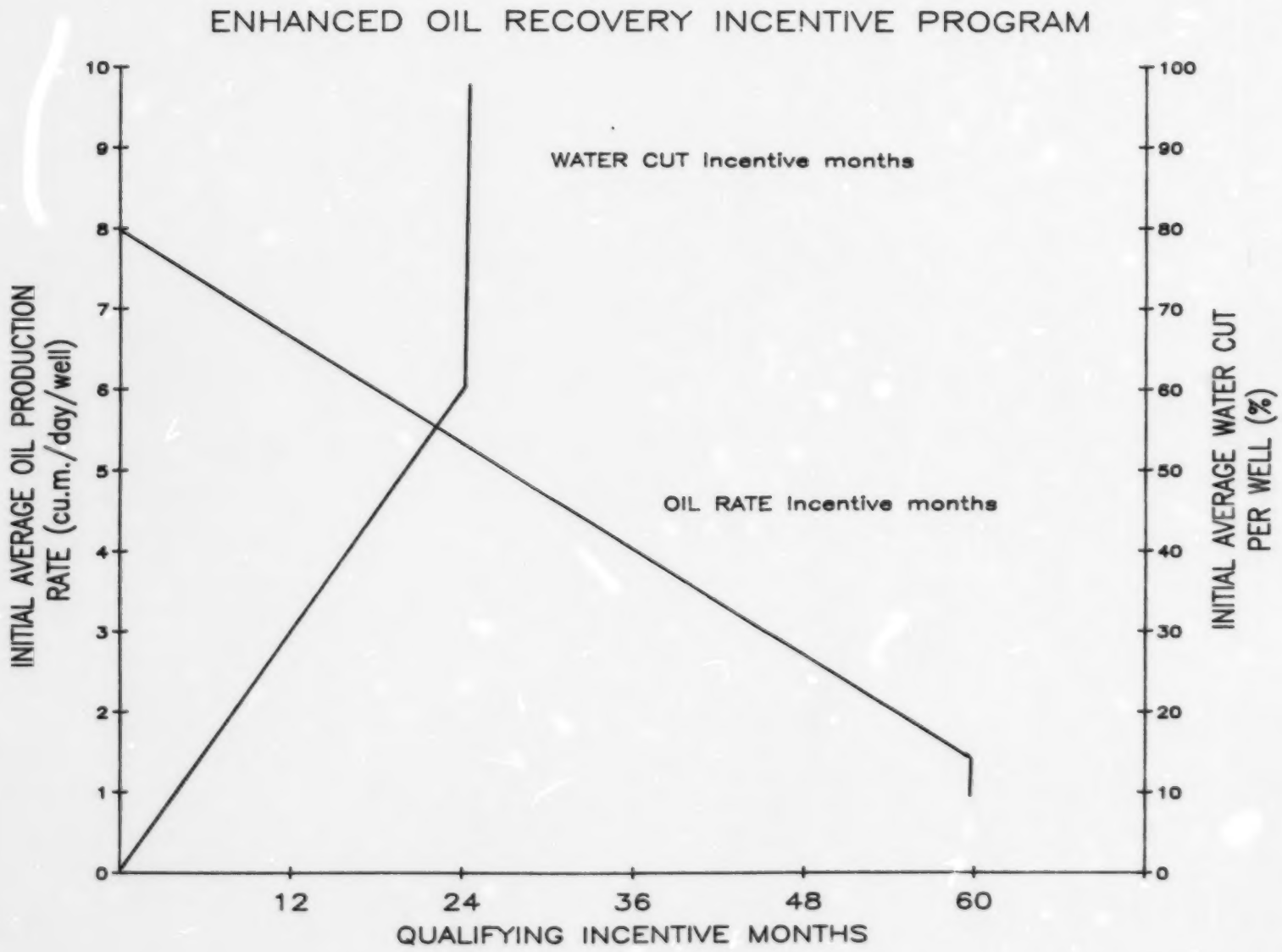

ENHANCED OIL RECOVERY INCENTIVE PROGRAM
WATER CUT Incentive months
OIL RATE Incentive months
INITIAL AVERAGE OIL PRODUCTION RATE (cu.m./day/well)
INITIAL AVERAGE WATER CUT PER WELL (%)
QUALIFYING INCENTIVE MONTHS
0
1
2
3
4
5
6
7
8
9
10
0
10
20
30
40
50
60
70
80
90
100
12
24
36
48
60

FIGURE 2

EXAMPLE
EOR INCENTIVE CALCULATION

Assume:

- -4 well project
- -each well produced 500 cu.m. oil in first 4 producing months
- -each well produced 760 cu.m. water in first 4 producing months
- -each well produced for 30 days / month (120 days)

Average Initial Oil Production q =(500 * 4)/(120 * 4)= 4.17 cu.m. / day

$$Io = 72 - 9(q)$$
$$= 72 - 9(4.17)$$
$$= 34.5$$
$$= 35 \text{ months}$$

Average Initial Water Cut (wc) = (4(760) / 4(500 + 760)) * 100 = 60.3%

$$Iwc = wc / 2.5$$
$$= 60.3 / 2.5$$
$$= 24.1$$
$$= 24 \text{ months}$$

$$EORIP = Io + Iwc$$
$$= 35 + 24$$
$$= 59 \text{ Producing Months}$$

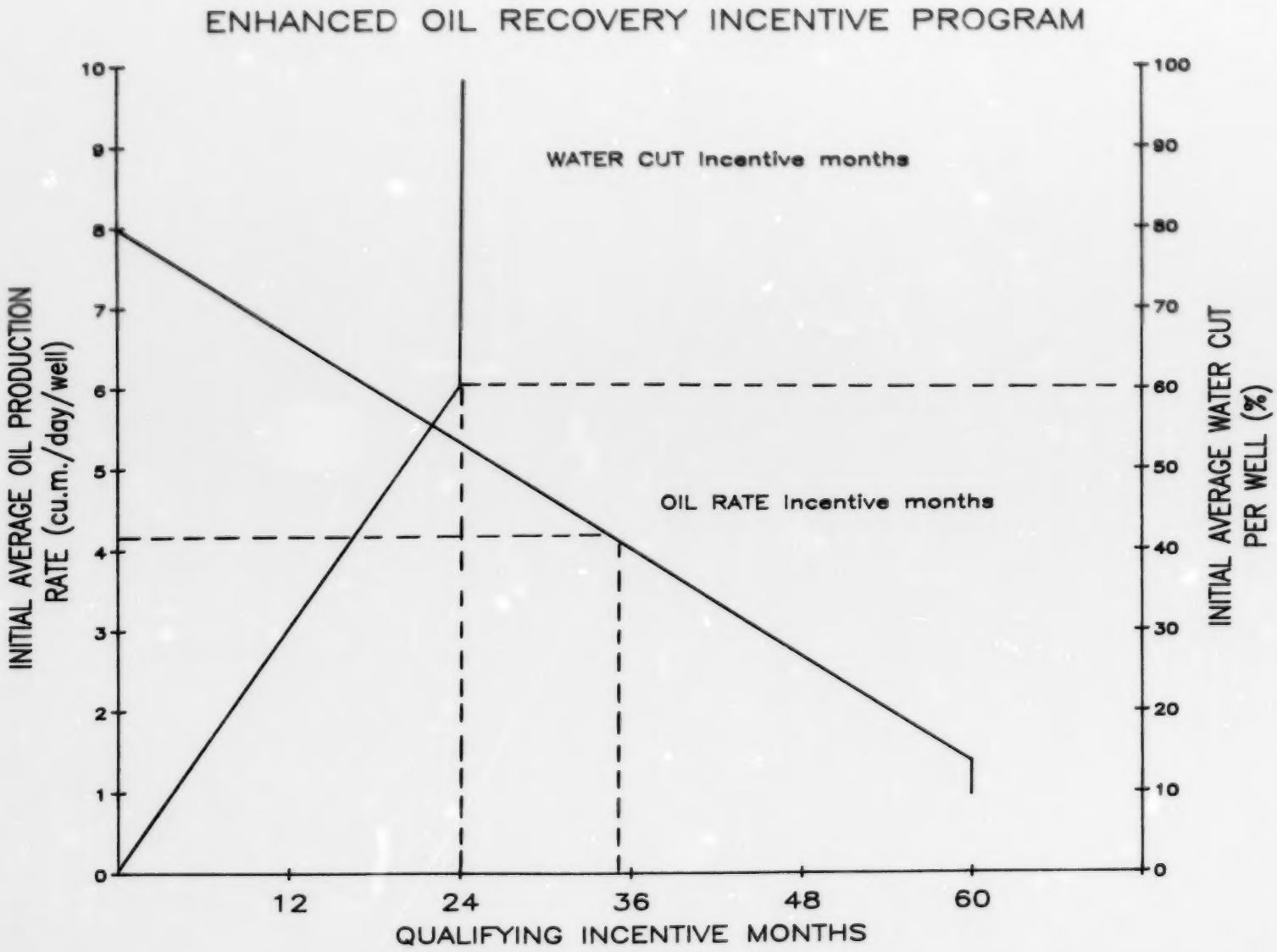

ENHANCED OIL RECOVERY INCENTIVE PROGRAM
WATER CUT Incentive months
OIL RATE Incentive months
INITIAL AVERAGE OIL PRODUCTION RATE (cu.m./day/well)
INITIAL AVERAGE WATER CUT PER WELL (%)
QUALIFYING INCENTIVE MONTHS
0
1
2
3
4
5
6
7
8
9
10
0
10
20
30
40
50
60
70
80
90
100
12
24
36
48
60

FIGURE 4

Summary

Both incentive programs are designed to provide greater encouragement for new exploratory well drilling while also assisting development drilling and ensuring maximum oil recovery from existing wells through enhanced recovery. In combination with the competitive Crown royalty and freehold tax rates which prevail in Manitoba, these new incentive programs provide active operators with immediate benefits and enable long range planning.

III. Provincial Crown Oil Royalties

Act: The Mines Act, (Cap. M160)

Regulation: Petroleum Crown Royalty and Incentives Regulation (MR 63/87 as amended by MR 264/87 & MR 153/89)

Effective Date: January 1, 1987

Administered By: Manitoba Energy and Mines (Petroleum)

The Petroleum Crown Royalty and Incentives Regulation governs Crown royalties with provisions for four (4) associated classifications of oil for royalty purposes, namely:

(1) "Holiday Oil" being the initial calculated volume of oil produced from a well drilled after December 31, 1986 which is exempt from Crown royalties and taxes.

(2) "Incentive Oil" being oil produced from a new well drilled prior to January 1, 1987 during the well's "royalty/production incentive period", and

oil produced from a new or enlarged enhanced recovery project during the "EOR incentive period" for the project.

(3) "New Oil" being oil produced from a well drilled on or after April 1, 1974 which is no longer "holiday oil" nor "incentive oil".

(4) "Old Oil" being oil produced from wells drilled prior to April 1, 1974 that does not qualify as "incentive oil" or "new oil".

The base or "Old Oil" royalty is the volume of Crown royalty oil calculated using the formula shown in Table 2.

These calculated base rates apply to "Old Oil" produced from Crown owned mineral rights.

The Crown royalty volume for oil produced from a well or spacing unit is the base Crown royalty volume as calculated by the formula in Table 2 multiplied by the appropriate Calculation Factor for that Oil Classification.

Table 2 also provides examples of monthly production rates and the corresponding Crown Royalty rate (expressed as a percentage) for each oil classification. Figure 5 provides a graphical illustration of these rates.

Note: Section 9 of the Regulation provides for the approval by Cabinet of the temporary or permanent reduction or exemption of Crown royalties charged on any oil or natural gas production where special circumstances are justified.

Table 2

Crown Oil Royalties

Base Formula:

Monthly Production per well in cubic metres (P)	Crown Royalty for the month in cubic metres (P)
0 - 50	$P^2 \div 265$
50 and over	9.43 + 0.45 (P-50)

Oil Classification	Calculation Factor
Old Oil	1.00
New Oil	0.55
Incentive Oil	0.35
Holiday Oil	0.00

Crown Royalty (m^3) = Base Formula x Calculation Factor

Crown Royalty (%) = (Base Formula x Calculation Factor) $\div$ Monthly Production

Sample Crown Royalty Rates (%)

Monthly Production (P) m^3/month	Holiday Oil	Incentive Oil	New Oil	Old Oil
20	Nil	2.6	4.1	7.5
50	Nil	6.6	10.4	18.9
100	Nil	11.2	17.6	31.9
250	Nil	13.9	21.9	39.8
500	Nil	14.8	23.3	42.4

IV. Provincial Freehold Oil Tax

Act: The Oil and Gas Production Tax Act, (Cap. 037)

Regulation: Oil and Gas Production Tax Regulation MR 358/87 as amended by MR 154/89)

Effective Date: April 1, 1987

Administered By: Manitoba Energy and Mines (Petroleum)

The Oil and Gas Production Tax Act (previously titled The Oil and Natural Gas Tax Act, Cap. 035) levies a monthly production tax on oil and natural gas from a well or spacing unit producing from freehold oil and gas rights.

The Act stipulates that the operator of the well is responsible for payment of the tax on any freehold oil or gas production. The mineral rights owner's and any other royalty owner's and working interest owner's share of the tax is deducted from the payment made to them by the operator from sales revenue.

Where a working interest owner takes his oil in kind and markets this oil, he may be designated as a special operator and is responsible for the filing of returns and payment of the tax for his share of production.

Taxes levied on oil production from freehold oil and gas rights are dependent on the monthly production rate of the well (in cubic metres) and the appropriate oil classification (similar to Crown oil royalties).

The regulation calculates taxes as a percent in accordance with the formulae shown in Table 3 for the appropriate oil classification. Figure 6 provides a graphical illustration of these rates.

Table 3

Freehold Oil Taxes

Formula by Oil Classification:

Oil Classification	Monthly Oil Production per well in cubic metres (P)	Oil Tax Rate for the well in % of production
Holiday Oil	- All Volumes:	Nil
Incentive Oil	- 56.0 or less:	Nil
	- more than 56.0:	$(9.27 - \frac{510}{P})$
New Oil	- 36.0 or less:	Nil
	- more than 36.0 but less than 65.0:	(0.23P - 8.11)
	- 65.0 or more:	$(19.59 - \frac{820}{P})$
Old Oil	- 20.0 or less:	Nil
	- more than 20.0 but less than 65.0:	(0.43P - 8.24)
	- 65.0 or more:	$(42.76 - \frac{1\,500}{P})$

Freehold Oil Tax Liability* (%)

Prod. Rate of well (m^3/month)	Holiday Oil		Incentive Oil		New Oil		Old Oil	
	Gross Tax	Net Tax	Gross Tax	Net Tax	Gross Tax	Net Tax	Gross Tax	Net Tax
20	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
50	Nil	Nil	Nil	Nil	3.4	2.9	13.3	11.3
100	Nil	Nil	4.2	3.6	11.4	9.7	27.8	23.6
250	Nil	Nil	7.2	6.1	16.3	13.9	36.8	31.3
500	Nil	Nil	8.3	7.1	18.0	15.3	39.8	33.8

* This table illustrates an operator's gross and net tax rates as a percent of total production assuming a 15% freehold royalty lease.

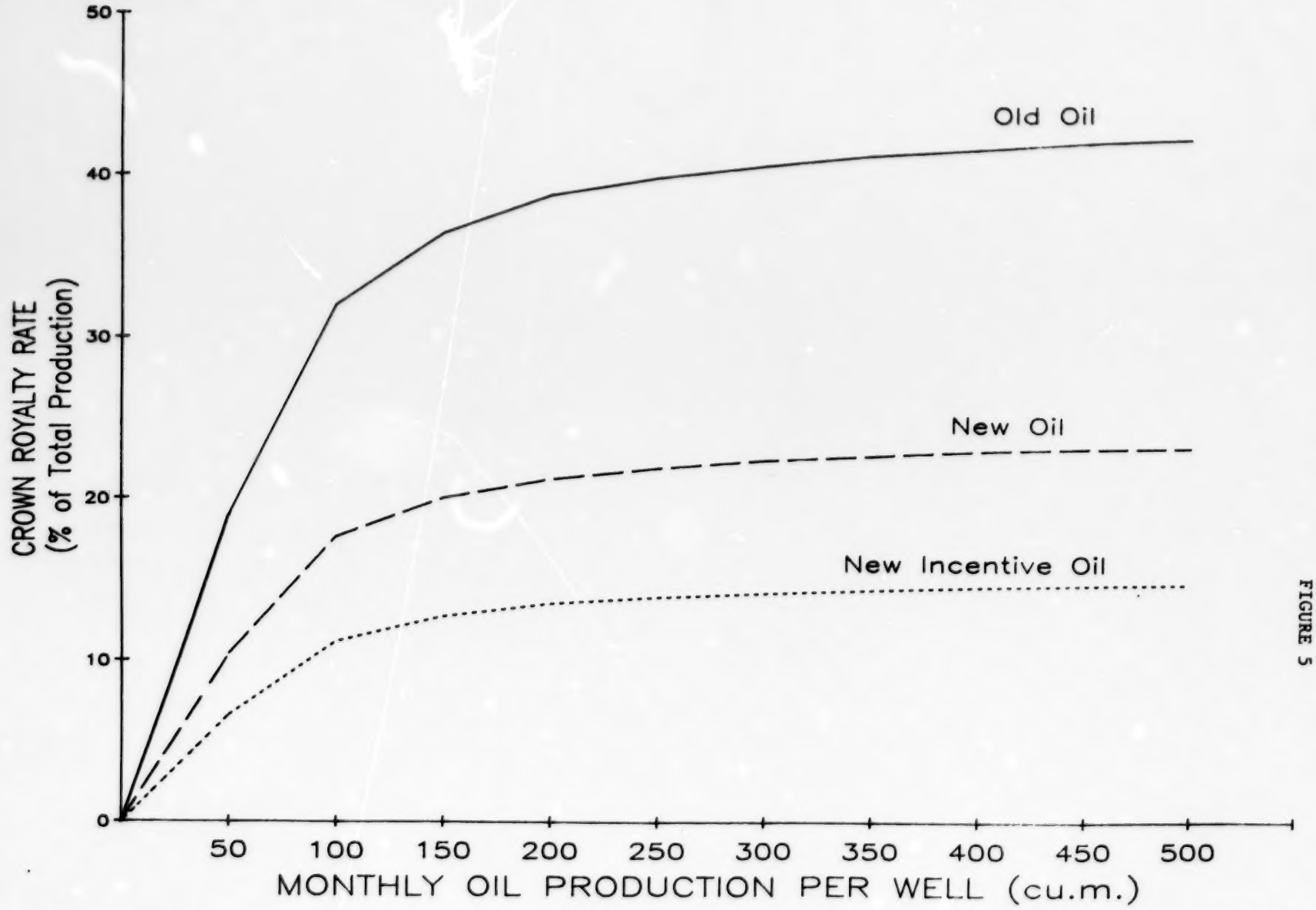

MANITOBA CROWN OIL ROYALTY RATES
CROWN ROYALTY RATE
(% of Total Production)
50
40
30
20
10
0
Old Oil
New Oil
New Incentive Oil
50
100
150
200
250
300
350
400
450
500
MONTHLY OIL PRODUCTION PER WELL (cu.m.)

FIGURE 5

MANITOBA FREEHOLD OIL TAX RATES

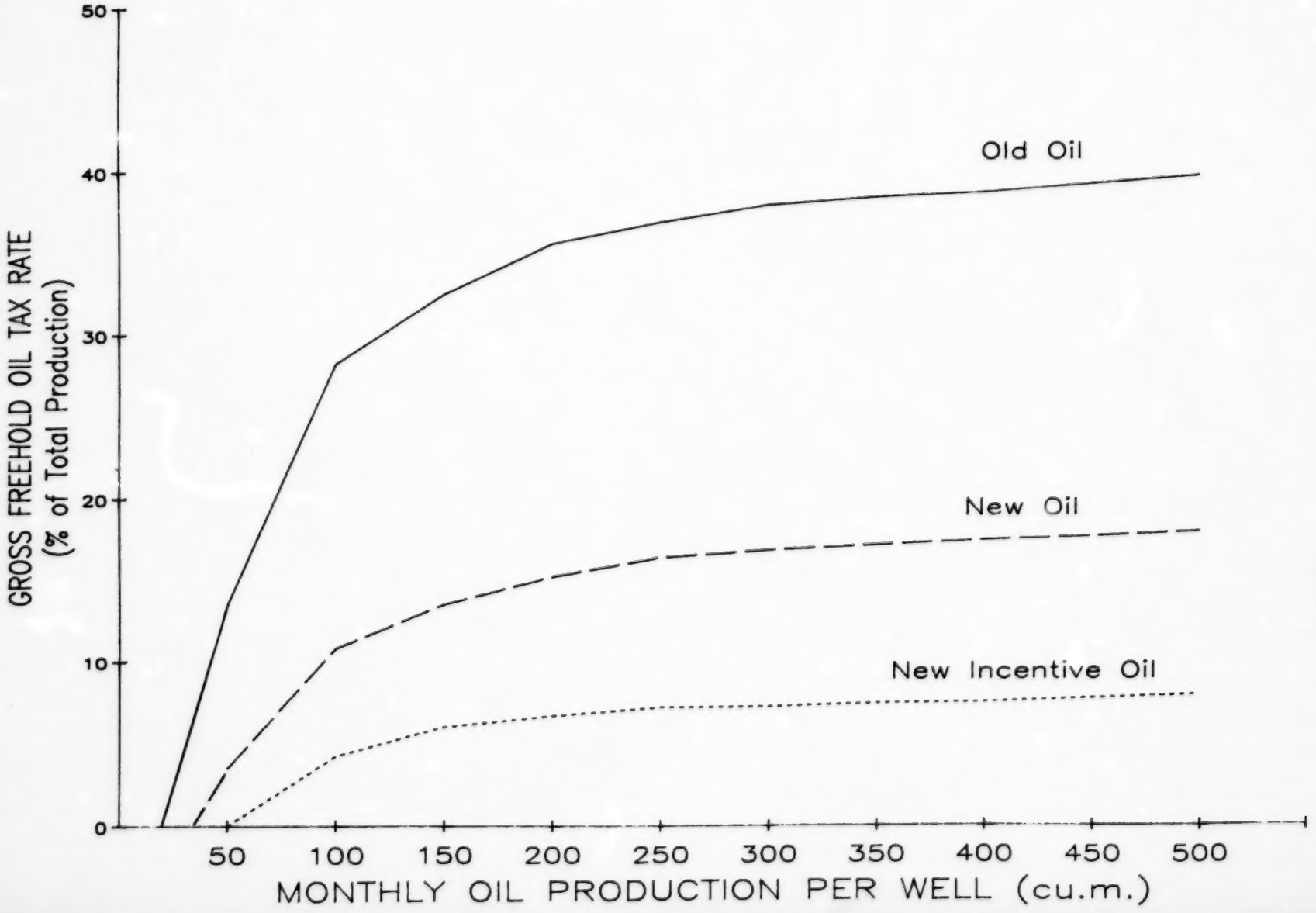
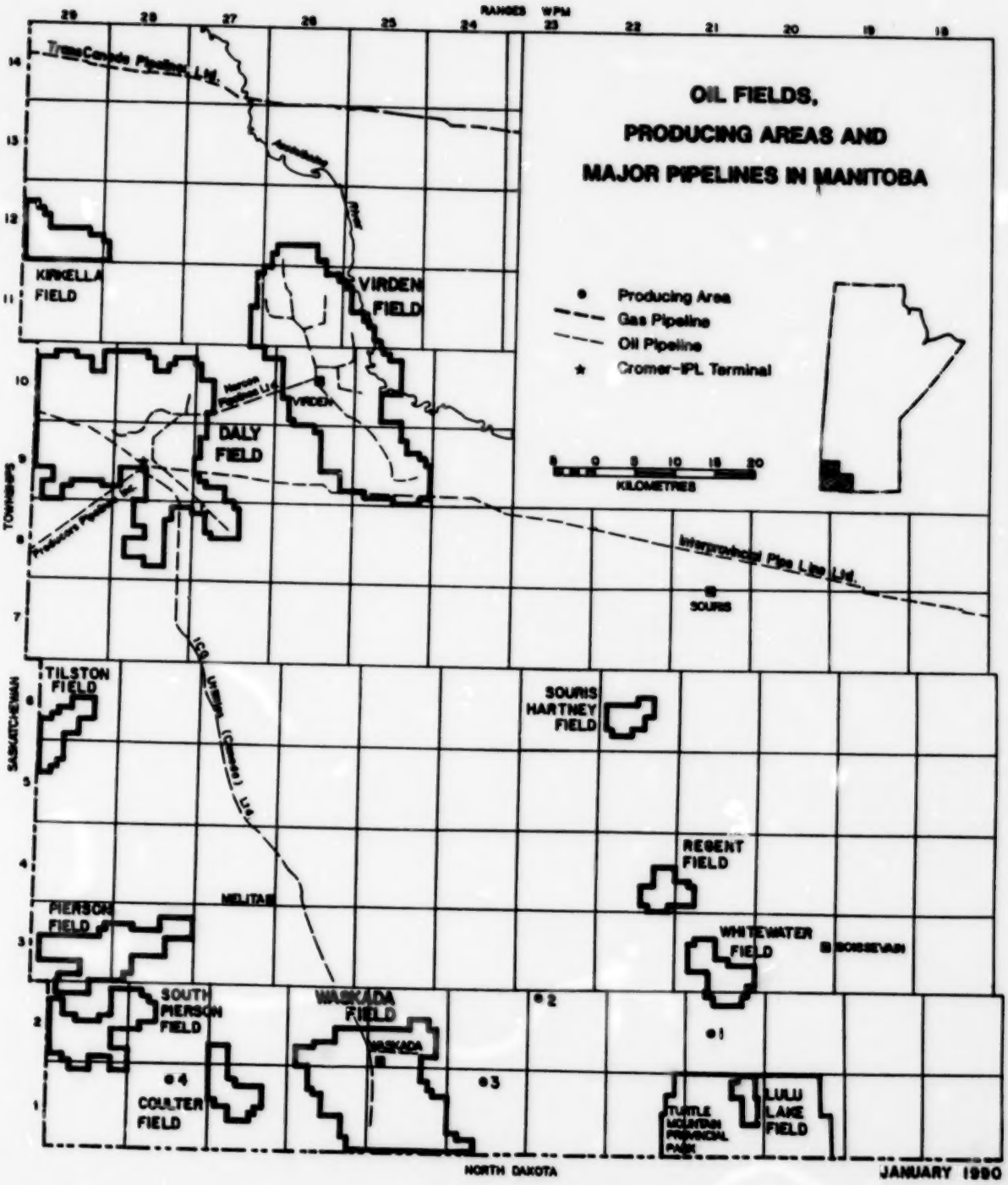


FIGURE 6

V. Provincial Gas Royalties and Taxes

The provincial Crown royalty payable on natural gas produced during each calendar month from a well or allocated to a spacing unit producing from Crown oil and gas rights is 12 1/2% of the volume consumed or sold off the location.

The provincial freehold tax payable on natural gas produced from a well or allocated to a spacing unit producing from freehold oil and gas rights is 1.2%.



OTHER PRODUCING AREAS

1. Mountainside
2. Deloraine
3. Goodlands
4. Lyleton